

Green Brothers Gravel Company Harmony Mine & Mill

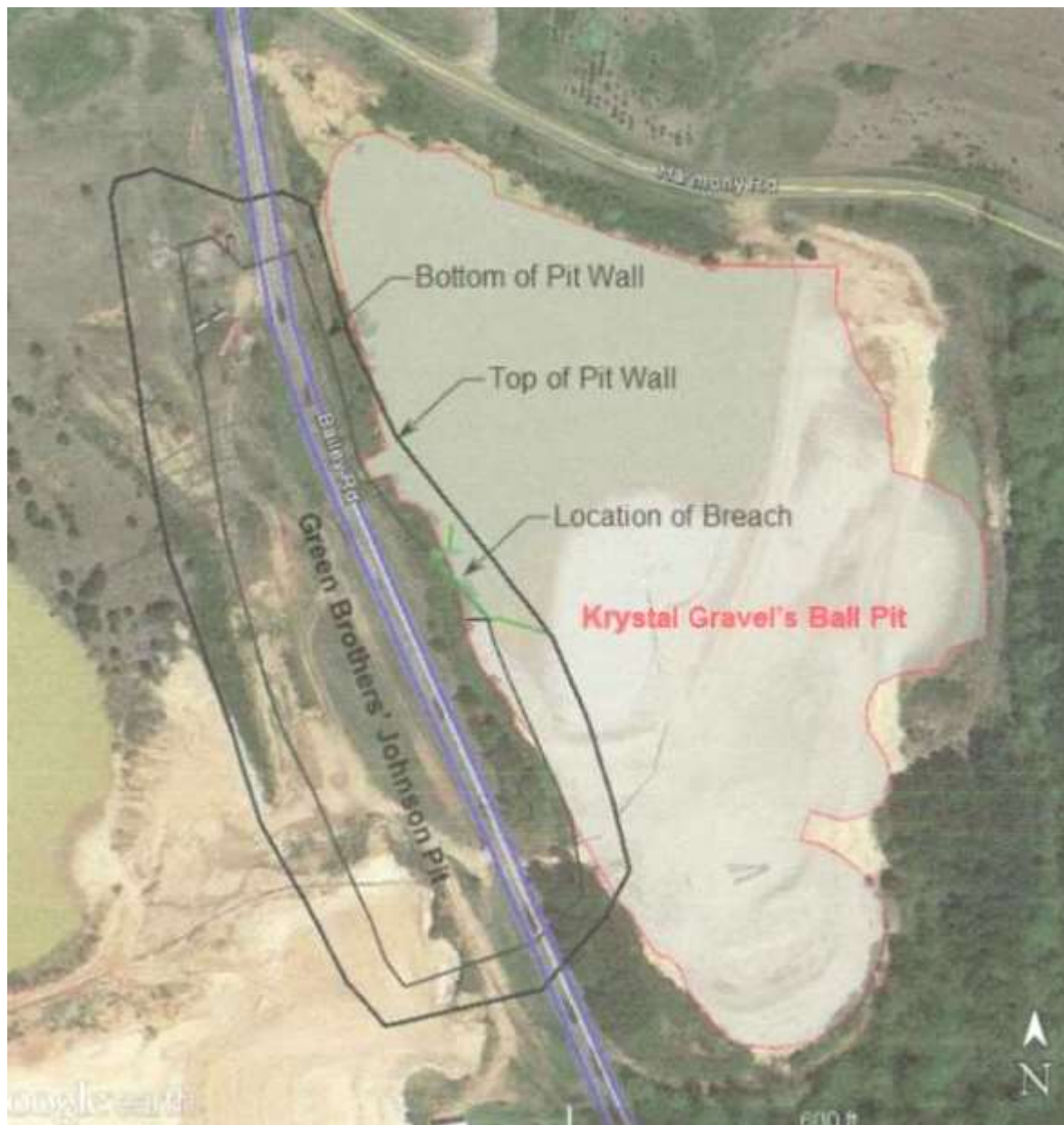
Fatal Accident: June 3, 2016

Overview

- June 3, 2016 James “Dee” Hemphill, Dirt Crew Supervisor (age 56), and Emmitt Shorter, Haul Truck Driver (age 24) were killed when they were engulfed with slurry.
- Hemphill was loading Shorter’s truck with an excavator about 50 feet west of the Johnson Pit wall.
- The pit wall failed and inundated the pit with liquefied slurry, engulfing the two miners.



The excavator was positioned near the east pit wall facing a northern direction at the time of the failure. The truck was on the west side of the excavator, and was facing south to southeast.





Information

Read the section entitled “Discussion” on pages 6-12 of the Accident Investigation report.

Information

- Was weather a contributing factor in this accident?
- Discuss the issues noted in the Mining Practice section.
- What did the Engineering Assessment find to be the cause of the pit wall failure?

Accident Cause

What was the cause
of the accident?

MSHA Root Cause 1

The mine operator failed to implement and use proper mining methods to maintain wall, bank, and slope stability.

Corrective Action: The mine operator established and implemented methods and procedures to maintain wall and slope stability by using proven industry methods. The operator also created and implemented a training program for all miners to identify highwall, bank and slope hazards and a method of reporting hazards to the mine operator for review and correction.

MSHA Root Cause 2

The mine operator failed to ensure the retaining dam was substantially constructed.

Corrective Action: The mine operator established and implemented methods and procedures to substantially construct dams by using proven industry methods. The operator also created and implemented a training program for all miners to identify a substantially build dam and a method of reporting hazards to competent people for review and correction.

MSHA Root Cause 3

The mine operator failed to install barriers or post warning signs to prevent miners from entering an area that it knew or should have know was hazardous, as exhibited by the operator installing the levee on the north side of the pit, causing water and waste material to enter the excavation area from the impoundment.

MSHA Corrective Action 3

The mine operator established and implemented methods and procedures to install barricades and/or warning signs to prevent miners from entering hazardous areas. The operator also created and implemented a training program for all miners to identify hazardous areas and a method of reporting hazards to the operator for review and correction.

MSHA Root Cause 4

The mine operator failed to conduct an adequate workplace examination and to recognize and correct obvious hazardous ground conditions on the east wall of the Johnson Pit and the Ball Pit impoundment.

MSHA Corrective Action 4

The mine operator established and implemented methods and procedures to examine, recognize and correct hazardous ground conditions. They also created and implemented a training program for all miners to identify hazardous areas and a method of reporting hazards to the mine operator for review and correction.

Accident Prevention

What could have prevented this accident?

Accident Prevention

Outline proper
procedure for
performing this task

MSHA Best Practices

- Make sure that embankments containing ponds of water, tailings, processing waste, or other fluids are designed and constructed to be stable, and that mining operations are kept a safe distance away.
- Provide hazard training to all personnel working on or near an impoundment to recognize hazards associated with the impoundment, such as surface cracks or piping, and to recognize adverse conditions and environmental factors that can decrease stability before beginning work.

MSHA Best Practices

- Embankments adjoining workplaces and travelways should be examined weekly or more often if changing ground conditions warrant.
- Adverse weather, such as heavy rain, may introduce or increase hazardous conditions associated with impoundments, highwalls, and embankments. Workplace examinations should be increased when these hazards are present to recognize changing conditions.

MSHA Best Practices

- Before beginning work, conduct a workplace exam from as many perspectives as possible (bottom, sides, and top/crest) of ground conditions that could create a hazard to persons and repair, support or remove if found immediately. Correct hazardous conditions by working from a safe location.